



Solar Feeders Portable Automatic Livestock Feeders

Troubleshooting Guide

If your Solar Feeder is not working properly most likely it is a bad battery. If the battery is determined to be good then it may be a bad timer, bare/broken wires (rodent damage or goats!), and finally but rarely the motor itself.

Troubleshoot in the following order and replace bad components as needed. All components are available direct from our suppliers. Solar Feeders does not stock these components for resale or replacement.

- 1. Check battery** (normal lifespan is 2 years) If it's bad then replace with a 12v 8ah w/F1 connectors such as this one - <https://www.amazon.com/UB1280I-Sealed-Lead-Acid-Batteries/dp/B0009GIKNE>
Even if the timer or charger indicates a full charge it could STILL BE THE BATTERY. Try another 12v just to be safe before you move to the next step.
- 2. Check the voltage** coming from the solar panel to make sure it's working. A 12V solar panel typically outputs 14-20V depending on the sunlight conditions.

It is rare that a solar panel goes bad or is defective. If you need to replace one here is the supplier -

BSP-5-12 Solar Panel 12v 5watt Ameresco 9.75"x9.38"x1.31"

<https://www.ecodirect.com/BSP-by-Ameresco-BSP-512-5-Watt-12-Volt-p/bsp-512.htm>

- 3. Check the solar panel and wiring**
Rarely a solar panel can be damaged due to hail, etc.
Replacement panels can be ordered direct at www.ecodirect.com
Specs: BSP-5-12, Solar Panel, 12v 5 Watt, BSP by Ameresco, 9.75"x9.38"x1.31"

- 4. Check THE TIMER**
Slide open the battery/fuse compartment located on the side of the timer and check/replace AA batteries and fuse (15 amp 125 v - ¼" x 1 ¼"). Then press RESET TIMER and TEST.

If the timer is bad or questionable you can order a replacement at the following locations -

<https://westtexasfeedersupply.com/product/the-timer/>

https://www.amazon.com/Timer-Digital-Deer-Feeder/dp/B0046H28YY/ref=sr_1_5?dc

The TIMER comes with wire connectors that connect to the motor and to the battery.

(NOTE) to change the "Test" seconds from the 5 second default press the "Set Clock" button and then quickly press the "Run Time" button to adjust the seconds from 1-20 and that will set the new "Test" seconds default. Setting higher "Test" seconds gives a more accurate measure of feed.

- 5. Check the TIMER wiring** connectors for good contact and any oxidation.

6. **Check wiring between battery and motor** for bare/broken spots which may be causing an electrical short. Even though we secure the wiring in flex conduit little goats and various critters can still crawl under the unit and wreck havoc!

You can purchase wiring/conduit directly from our supplier - McMaster Carr www.mcmaster.com

Electrical cable, SJEOOW,14ga 2 wire black, part# 7082K28 @ 25 feet. \$29.25

Flex 3/8" conduit, part# 74115K2 @ 10 feet. \$11.60

You must pick the specific length when ordering

These lengths will work for the 1000/1000G & 2500

7. **Check the spinner motor**

Go underneath the feeder and remove the sheet metal screws that hold the motor box cover.

Examine motor for evidence of burn out.

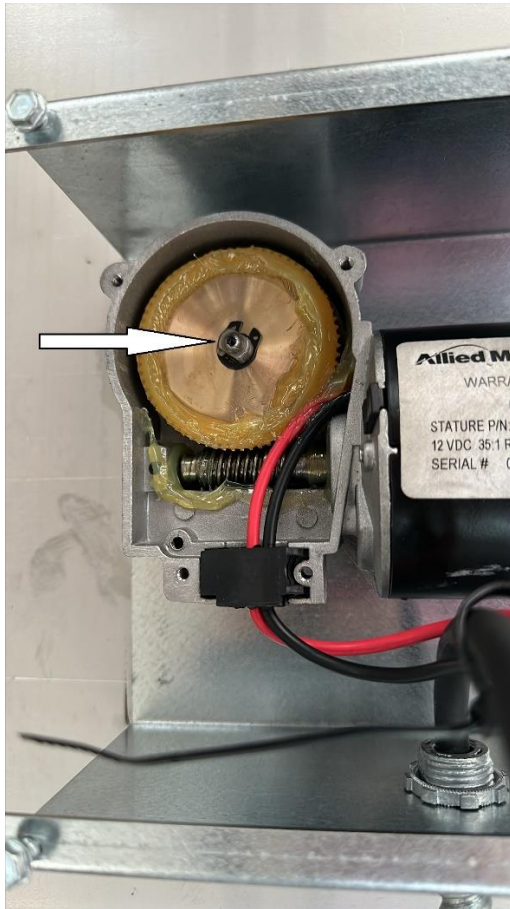
Check & clean the motor connectors for corrosion or electrical short and connect the 12v battery directly to the motor to check it.

The problem MAY be a broken snap ring that secures the vertical spinner shaft to the gear assembly.

To check unscrew the 4 Phillips head screws securing the plate to the box at the side of the motor.

Remove the plate and check the snap ring that secures the vertical shaft to the gear.

If broken replace snap ring and problem should be solved.



If snap ring and gear/shaft assembly are intact then proceed to replacing the motor.

8. Replacing the motor

Loosen the collar just below the spinner plate w/allen wrench.

Spin the plate up and off of the shaft.

Loosen the 3 top bolts (see photo below) that surround the spinner shaft just below the spinner plate and the motor will drop out.

Remove the threaded shaft from the motor shaft by loosening the set screw and use a small punch to remove the roll pin.

Next fit the threaded shaft over the new motor shaft and use the roll pin hole as a guide to drill a 5/32" hole through the motor shaft (shaft is fairly soft metal).

Secure threaded shaft to motor shaft w/roll pin and set screw and reverse the removal process.

A new replacement motor can be purchased direct from the following website -

<https://www.surpluscenter.com/Brands/Stature-Electric/100-RPM-12-Volt-DC-Gearmotor-5-1649.axd>

